View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Elsevier - Publisher Connector

environment, these 2 closely linked objectives are really served by keeping HSCT in the exclusive domain of 1 specialty or by opening it up to the legitimate practitioners of medical immunology. The very beginnings of HSCT—by immunologists—may serve as precedent [4].

REFERENCES

1. Gajewski JL, LeMaistre CF, Silver SM, et al. Impending challenges in the hematopoetic stem cell transplantation physician workforce. Biol Blood Marrow Transplant 2009;15:1493-1501.
2. Hsieh MM, Kang EM, Fitzhugh CD, et al. Allogeneic hematopoetic stem-cell transplantation for sickle cell disease. N Engl J Med 2009;361:2309-2317.
3. Anasetti C. ASBMT eNews. November 2, 2009.
4. Gatti RA, Meuwissen HJ, Allen HD, Hong R, Good RA. Immunological reconstitution of sex-linked lymphopenic immunological deficiency. Lancet 1968;2:1366-1369.

Demetrios S. Theodoropoulos, MD, DSc
Allergy Associates of La Crosse, Wisconsin

Biol Blood Marrow Transplant 16: 560–561 (2010)
© 2010 American Society for Blood and Marrow Transplantation
doi:10.1016/j.bbmt.2009.12.535

Response to Letter from Demetrios S. Theodoropoulos, MD, DSc

We appreciate Dr. Theodoropoulos' letter and comments [1]. Dr. Theodoropoulos points out that the rapid changes in medicine today in both personalized molecular medicine and the emerging field of regeneration medicine is creating a new landscape that may alter our projections for the need for an expanded hematopoietic stem cell transplantation (HCT) workforce over the next decade. He is correct that these numbers could ultimately be curbed somewhat from our projections that were made based on the changing demographics of the aging population of this country, the expanded indications, and as have been documented with the recent publication by the Healthcare Cost and Utilization Project, which demonstrated that bone marrow transplant was associated with the greatest percentage change and total hospital stay during the years 2004 to 2007 [2]. However, based on our current appreciation of personalized molecular and regeneration medicine, we can at least be assured that reduction is in transplant procedures will not occur in the near future.

With regard to his suggestion that the field of HCT be open to other disciplines, it should be noted that, currently, FACT and NMDP accreditation recognition of HCT physicians are for individuals primarily boarded as internists or pediatricians, with subspecialty training in hematology, medical oncology, and/or immunology [3,4]. However, historically, nearly all HCT providers have arisen from hematology/oncology training programs. Recruiting physicians from other specialty areas is an intriguing concept for increasing the HCT workforce, and could be a potential and welcome solution to some of the projected workforce shortage.

HCT providers must have extensive knowledge of inpatient medicine in addition to HCT-specific immunology, treatment regimens, infectious complications, cell collection by apheresis, and bone marrow harvest and cell processing. HCT patients have a significant need for inpatient services for management of pancytopenia, infectious complications, immunologic complications like graft-versus host disease (GVHD) and comorbid diseases exacerbated by the transplant process. Additionally, it is critical to understand the natural history of the disorders for which HCT is utilized to best balance the use of alternative therapies versus transplantation. Consequently, because about 85% of transplants are done to treat malignancies, a firm grounding in the care of oncologic diseases is essential, and the reason that traditional HCT programs have arisen in divisions of hematology and/or medical oncology.

One solution for the projected workforce shortage is an ACGME accredited or nonaccredited fellowship. Whether a 1-year HCT fellowship would successfully provide the adequate background in management of patients with hematologic malignancies or other transplantable malignancies for physicians trained in allergy and immunology or rheumatology fellowships, both of which focus on outpatient care, is unclear. It might be necessary to have a longer period of training for physicians whose initial board certification does not address competence in all of the oncologic and critical care areas required for HCT practice. However, there could be different areas of emphasis during a training program with the recognition that the management of the outpatient chronic medical conditions experienced by the posttransplant patient may be better served by individuals trained in the management of outpatient immunology and rheumatologic disorders.

Board certification is to demonstrate a newly trained physician has mastered a knowledge and skill set to practice a given area of medicine. Recertification should demonstrate that a physician practicing in the area is maintaining an adequate knowledge and skill set to continue to practice in that field. Bone and marrow transplantation (BMT) fellowships do not currently have a mandatory curriculum. The closest to establishing a detailed skill set that should be mastered by the HCT specialist is the FACT-required procedural and knowledge skill set. However, it should be noted that these guidelines do not distinctly define a skill set needed for the management of complex multiorgan illnesses in inpatients and outpatients. This

is an assumed competency from residency, but as stated in our article [5], the shift in residency education to an outpatient focus means that such competency should probably not be presumed, particularly in this era where hospitalists are evolving and arising as the national standard for inpatient management. These recognitions emphasize that a broad multidisciplinary collaborative effort on future HCT patient management may evolve, which we would welcome.

Currently, HCT fellowships are not ACGME accredited because they do not lead to an ABMS board certification. Although some believe the field should evolve toward board certification, not all current transplant physicians feel that this step is essential, and there is concern that it would provide yet another barrier to recruiting physicians to practice in this complex field. Additionally, for specialties with small workforces where the expected numbers of examinees would be fewer than 50 per year, it is not certain that additional new board certification would be approved by the national accrediting body of the American Board of Internal Medicine or the American Board of Medical Specialties even if requested. Whether board certification in HCT would motivate physicians in other disciplines to further involve themselves in this field when their own field has a workforce shortage remains unclear.

The ASBMT plans over the next several years to initiate a series of interventions to address these issues. Plans are underway for ASBMT to publish a core curriculum for HCT fellowships. To help HCT practitioners demonstrate continued competency and to assist with recertification or maintenance of certification for hematology and medical oncology boarded practitioners, ASBMT plans to create a Practice Improvement Module (PIM). ASBMT recognizes that the field needs to improve training and credentialing. These incremental steps will be a good start. Looking toward more aggressive recruitment of expertise from other medical disciplines may be a new initiative worthy of early, versus later, exploration.

REFERENCES

1. Theodoropoulos DS letter to BBMT. Biol Blood Marrow Transplant 2010;16:560–561.
2. Internet Citation: statistical Brief #82. Healthcare Cost and Utilization Project (HCUP). November 2009. Agency for Healthcare Research and Quality, Rockville, MD. Available at; www.hcup-us.ahrq.gov/reports/statbriefs/sb82.jsp
3. Internet Citation: foundation for the Accreditation of Cellular Therapy, Accreditation Manual 4th Edition, July 2009. Available at: http://www.factwebsite.org/uploadedFiles/News/4th%20Ed.%20Accreditation%20Manual%20v.%204.1.pdf
4. Internet Citation: National Marrow Donor Program Standards and Glossary, March 2009. Available at: http://www.marrow.org/ABOUT/Who_We_Are/NMDP_Network/Maintaining_NMDP_Standard s/Standards_PDF/NMDP%2020th%20Ed.%20Stds.pdf
5. Gajewski JL, LeMaistre CF, Silver SM, et al. Impending challenges in the hematopoietic stem cell transplantation physician workforce. Biol Blood Marrow Transplant 2009;15:1493-1501.

James L. Gajewski, MD, FACP
Michael Lill, MD
Mary Horowitz, MD
Richard T. Maziarz, MD
Portland, Oregon

Biol Blood Marrow Transplant 16: 561–562 (2010)
© 2010 American Society for Blood and Marrow Transplantation
doi:10.1016/j.bbmt.2010.02.001

Erratum

In "Pulmonary, Gonadal, and Central Nervous System Status after Bone Marrow Transplantation for Sickle Cell Disease" (Walters et al., Biol Blood Marrow Transplant 2009:16:263–272) the following author was omitted: Ann Haight, MD, Emory University, Atlanta, GA.

DOI of original article: 10.1016/j.bbmt.2009.10.005
Biol Blood Marrow Transplant 16: 562 (2010)
© 2010 American Society for Blood and Marrow Transplantation
doi:10.1016/j.bbmt.2010.02.019